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ABSTRACT

In 2001, the American Association of Colleges for Teacher Education Board of Directors created a focus council examine what all preservice teacher candidates need to know about reading. The council soon broadened the scope of its work from reading to literacy, focusing specifically on grades K-4. This paper is the council's report to the Board. The council organized its work around three issues: how K-4 children become literate and what teachers need to know; how teachers should teach K-4 literacy based on what is known about how they learn to read and write; and what teacher education programs should do to prepare effective literacy teachers. Part one addresses the research available to define how children become literate. Part two explores how this research can be used to create the scientifically based instruction called for in the current political climate. Part three identifies how this knowledge can be applied to the design of teacher preparation programs for early childhood and elementary literacy teachers. The appendixes supplement the paper with excerpts from relevant national standards and with descriptive examples of effective undergraduate teacher preparation programs for early literacy instruction. (Contains 152 references.) (SM)

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AACTE FOCUS COUNCIL ON LITERACY

Research-Based Literacy Instruction

Implications for Teacher Education

A White Paper of the
American Association of Colleges for Teacher Education
FOCUS COUNCIL ON LITERACY

Fall 2002

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The American Association of Colleges for Teacher Education is a national, voluntary association of colleges and universities with undergraduate or graduate programs to prepare professional educators. The Association supports programs in data gathering, equity, leadership development, networking, policy analysis, professional issues, and scholarship.

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AACTE is publishing this document to stimulate discussion, study, and experimentation among educators, policy makers, foundation officials, and others interested in literacy.

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Preface

AACTE commissioned the following paper with two motivations in mind. The first was to recognize the Association's significant stake and investment in literacy issues as the critical key to student learning. Students who cannot read and write are doomed to failure in the school system. A teacher's ability to teach literacy is the greatest determiner of a student's ability to acquire literacy skills. Teachers who lack the ability to teach literacy affect not just one student but every student in a class, and thus the success or failure of many students. As an association that represents education faculty, we must carry out this responsibility to prepare the most qualified teachers. The aim of this paper is to help education faculty understand the basics of literacy issues and to use the paper's recommendations to strengthen their approaches to preparing literacy teachers.

The second motivation for writing this paper responds to a political agenda reflected in provisions of the No Child Left Behind Act of 2001. One of this legislation's many components is the Reading First program, aimed at improving the literacy of K-3 students, in which states' applications for grants must include demonstration that they will use reading programs scientifically proven to improve literacy. We believe that this legislation includes many sound reading programs but excludes other effective reading methods and also excludes or undermines writing as part of literacy. One danger is that the Reading First program will be found to favor only phonics-based, scripted curriculum. The larger danger is that the No Child Left Behind legislation will force states into adopting a one-size-fits-all reading curriculum with an emphasis on phonics to the unnecessary exclusion of other sound approaches that can build strong literacy skills with the diverse groups of students represented in our classrooms today.

We in the teacher education community hold important the professional expertise on which experienced teachers base their literacy knowledge, their ability to adapt instruction to individual students' literacy needs, and their capacity to create programs that include multiple methods of teaching literacy. The approaches of highly effective teachers include scientifically based curriculum as defined by the legislation, teachers' knowledge of their students, and many "beyond phonics" literacy programs that are available for teachers to use.

Our hope is that this paper will point the way to more comprehensive approaches for teaching literacy and that teachers, teacher educators, and—most of all—students can not only meet the requirements of federal legislation but go beyond it toward higher levels of literacy and meaningful student learning.

Introduction

In 2001, the AACTE Board of Directors created a focus council to answer the question *What do all preservice teacher candidates need to know about reading?* The council soon decided to broaden the scope of its work from reading to *literacy*, which includes written language as well as reading, and to focus specifically on Grades K-4. This paper is the council's report to the board.

The Focus Council on Literacy then organized its work around three questions:

- How do children in Grades K-4 become literate, and what do teachers need to know?
- Given what we know about how children in Grades K-4 learn to read and write, how should teachers should teach?
- What do teacher education programs need to do to prepare effective teachers of literacy?

Literacy instruction and the design of the environment essential for this instruction

continue to be controversial curricular issues for school systems and individual schools. The current political climate clearly supports methods grounded in "scientifically based research," defined in the No Child Left Behind (NCLB) Act as the "application of rigorous, systematic, and objective procedures to get reliable and valid knowledge." This research may use "measurement or observational methods but must employ rigorous data analysis to test the stated hypothesis. Therefore, this paper places strong emphasis on research linked to children's literacy learning and on best practices in instruction and teacher preparation.

In April 2000, the National Reading Panel (NRP), a congressionally mandated independent panel of specialists, released what it called the "largest, most comprehensive evidence-based review ever conducted of research on how children learn reading." The report concluded that "the most effective way to teach children to read is through instruction that includes a combination of methods." (National Reading Panel, Press Release, April 13, 2001). This combination of methods includes an emphasis on phonemic awareness, phonics, guided oral reading, and comprehension strategies. While there is considerable disagreement concerning how these various methods should be taught, the acceptance by the National Reading Panel that no single approach best produces effective readers clearly defines the kind of broad-reaching preparation that teachers of reading/literacy should receive in their preparation programs.

The National Reading Panel made no real recommendation concerning the overall preparation of teachers, citing inadequate research in the area. The panel did note that explicit preparation in reading for "both new and established teachers" has been shown to produce higher student achievement. According to the panel's report, teachers must understand how children learn to read, why some children have difficulty learning to read, and how to identify and implement the most effective instructional approaches."

The intent of this white paper is to provide information on the ways in which research-based knowledge of how children learn in all areas of literacy, including reading, and why some children may experience difficulty in learning should impact and inform classroom instruction and the preparation of new teachers. The NRP's recognition of the importance of providing professional development for "established teachers" is significant as well, but professional development of practicing teachers is beyond the scope of this paper. We recognize that in the present political climate regarding literacy instruction, many decisions must be made regarding reading methods, programs, and materials that best provide effective literacy learning for beginning readers. Morrow (2002) suggests, "Teachers and administrators must have professional development that allows them to examine and evaluate all claims that programs and materials are supported by scientifically based reading research." The American Federation of Teachers reaffirms the impact of professional development on teaching as it states, "Without professional development, school reform will not happen. Professional development can no longer be viewed as a dispensable appendage that can be cut at will or an activity that can be isolated from the achievement of comprehensive or 'systemic' reform" (2002, p.28). The Learning First Alliance (2000) notes that the "continuous improvement in the practical skills of each component of reading instruction is the goal of every competent teacher" and that "improvement in teaching is a lifelong enterprise that requires mentoring, observation, follow-up evaluation, and problem solving with peers" (p. 28). It is unrealistic to assume that preservice teachers leave universities with all the knowledge and information they will need to supply effective literacy instruction throughout a 25-30 year career. New research, publications, methodologies, and technologies make literacy instruction very dynamic. Only well-planned, well-executed professional development that allows time for implementation, reflection, and redirection can support literacy professionals and ensure that they remain highly effective in teaching children to read and write.

As the AACTE focus council has approached its very serious task of identifying what all preservice candidates need to know about literacy instruction, it faced much conflict concerning what constitutes the "combination of methods" recommended by the NRP and others and how these methods are best taught to preservice teachers to be subsequently implemented in the classroom. Some superintendents and school boards, as well as entire state school systems, such as California, have mandated a sole, carefully designed approach rather than a combination—thus setting off a so-called war among various narrowly defined approaches to literacy. Other groups, both school- and community-based, have turned their attention to the evaluative side of literacy instruction to emphasize how effective reading instruction can be *measured*, resulting in conflict between paper-and-pencil standardized testing and more holistic evaluation approaches. Some parties would allow evaluation to drive the literacy curriculum through high-stakes assessment, while others advocate a more continuous assessment that can guide instruction.

Part I of this white paper addresses the research that is available to define how children become literate. Part II explores how this research can be used to create the scientifically based instruction called for in the current political climate. Part III then identifies how this knowledge can be applied to the design of teacher preparation programs for early childhood and elementary teachers of literacy. The goal is to identify not specific courses to be included in teacher preparation programs but, rather, the experiences and knowledge that must be included in the coursework in effective programs. The appendixes supplement the paper with excerpts from relevant national standards and with descriptive examples of effective undergraduate teacher preparation programs for early literacy instruction.

PART I

How Children Become Literate: What Teachers Need to Know

Early Language and Literacy Development

Young children enter public school with a wealth of knowledge about language and print (Harste, Woodward, & Burke, 1984; Clay, 1991; Snow, Burns, & Griffin, 1998; Sulzby & Teale, 1987; Senechal, LeFevre, Thomas, & Daley, 1998). Their expressive oral vocabulary may be almost 5,000 words, and their knowledge of their native language is reflected in the use of complex sentences and their application of social pragmatics[1] (Roberts, 1998; Lindfors, 1987). In addition, kindergartners possess phonological systems that are nearly comparable to those of the adult native speaker, even when "developmental pronunciations" are evident[2] (Lindfors, 1987). Children's preschool sociocultural histories shape the ways in which they interact with and around text (Dyson, 1993; Heath, 1982). As the quality and accessibility of these preschool experiences vary, so does the child's level of "preparedness" for success within the public school setting (Adams, 1990; Clay, 1991).

In addition to differences in the availability and richness of preschool experiences, new entrants may present a range of learning and teaching challenges, including minimal fluency in the mainstream language and physical and/or cognitive differences. The link between engagement in print-related activities and both language and cognitive development has been documented (Stanovich, 1992; Cunningham & Stanovich, 1991; Elley, 1989; Chomsky, 1972). It is critical that teachers recognize and take advantage of the strengths that

1 *Pragmatics* refers to the social constraints that "govern" one's use of language in specific contexts. In essence, *social pragmatics* refers to the individual's knowledge of knowing what he can say, how and when he can say it, and to whom he can say it.

2 For example, it is not uncommon for entering kindergartners to struggle with the "r" and "w" sounds, as in "siwwy wabbit" [silly rabbit].

their diverse learners bring to their classrooms. At the same time, teachers must appreciate the impact of students' differences on the acquisition of the literacy tasks required in school settings. That is, the teacher must have a strong grasp of how children have come by their current competencies in order to guide and support them as they begin their apprenticeship in academic literacy (Clay, 1998; Purcell-Gates, L'Allier, & Smith, 1995). It is equally critical that teachers recognize what young learners still need to learn and that they structure language and literacy activities that promote their development in the earliest stages of formal reading instruction (Vellutino & Scanlon, 1996).

School Literacy Learning Theories

Although a range of theories compete to explain the precise ways in which young children become literate, some common observations may be made. First, we know that children learn the value and functions of print by observing its use by more sophisticated readers and writers (Harste et al., 1984; Clay, 1998; Taylor, 1983). Second, young learners must have opportunities to engage actively in a variety of purposeful literate endeavors, including occasions to read, write, and talk about text with a more knowledgeable mentor (Allington, 1983; Ruiz, 1995; Clay, 1991, 1998; Neuman & Roskos, 1997; Snow et al., 1998). Third, it is generally accepted that by participating in experiences involved in acquiring literacy, students will also acquire a rich infrastructure of knowledge and skill that will enable increasingly more complex and sophisticated literacy performances. Fourth, teacher expectations are important. We know that children are more likely to achieve literate competence when their teacher expects that they will succeed (Cambourne, 1995; McGill-Franzen & Allington, 1991; Askew & Fountas, 1998; Erickson & Koppenhaver, 1995; Gioia & Johnston, 2001).

In addition to all of the benefits and by-products of school literacy learning opportunities, students must gain a deeper understanding of the nature and functions of oral language and its entailments (the phonological, semantic, syntactic, and pragmatic systems) and the functions that print serves. Considerable evidence also suggests that vocabulary knowledge, automaticity in word recognition, phonemic awareness, and knowledge of phonic elements (letter-sound correspondences and word patterns) improve through engagement in purposeful reading and writing endeavors.

Further, metacognitive monitoring strategies—the ways in which we think deliberately about our problem solving while reading to determine whether things make sense and what to do when they do not—also flourish as students read and write across topics and genre. Additional comprehension strategies, such as inferring causal explanations or recognizing important ideas, become increasingly abstract and creative as students extend and enrich their connections to and with text. Even the discourse patterns involved in talking about text in academic settings (learning to do "book talk") alter as students become sensitized and socialized to the ways in which teachers value literary responses.

Despite a great deal of consensus among researchers regarding the social nature of literacy learning, it is important to note that most differences among theorists of reading acquisition revolve around how to *teach* these elements, not whether readers do or should *learn* them. For example, those theorists who are associated with the "whole language" (e.g., Goodman, 1986, or Smith, 1992) approach do not deny that knowledge of phonics or phonemic awareness is learned by students; they question the need to teach it directly, explicitly, and systematically for all children, arguing that both are as likely to be the consequences as the causes of learning to read connected text. Conversely, theorists more associated with advocacy of explicit teaching of phonics and phonemic awareness (e.g., Adams, 1990) do not argue that knowledge of phonics or phonemic awareness cannot be acquired incidentally as children learn to read; however, they question the efficacy of policies that leave the acquisition of such fundamental constructs to chance.

Given these considerations, how then does it appear that children grow as readers and writers?

Children develop literate competence through social interactions that are shaped by the cultural setting in which they take place. Norms and expectations that have formed over time exert influence on the actions, interpretations, and aspirations of those involved in the interaction (Kantor, Miller, & Fernie, 1992). Literacy instruction is greatly mediated by what teachers value as important (Barone, 1996; Moustafa, 1998). For example, when students are presented with literacy instruction that fosters an overeliance on a single means of decoding text, they are less likely to exhibit flexible problem solving skills when presented with new or unfamiliar material (Lyons, 1991). Indeed, effective teachers engage their students in a variety of reading and writing activities and resist limiting their instruction to one particular strategy or narrowly defined paradigm (Duffy & Hoffman, 1999).

During kindergarten, children who have not already done so begin to explore the alphabetic principle (Clay, 1991; Roberts, 1998). Through direct instruction and student-driven explorations, children learn letter names and sounds as well as various high-frequency spelling patterns (Richgels, Poremba, & McGee, 1998; Bear, Invernizzi, Templeton, & Johnston, 1996; Vellutino & Scanlon, 1996). Teachers demonstrate the relationship between speech sounds and letters within the context of shared reading and writing lessons, and young authors follow this example when they stretch the sounds they engage in through shared writing (Sowers, 1986; Sipe, 2001). As they engage in early drawing and writing efforts, young children explore the abstract symbolic nature of print and also begin to grasp its relative permanence and power (Neuman & Roskos, 1997; Harste et al., 1984). Students' invented spellings reveal to teachers the letters and spelling patterns over which the child is gaining control (Sowers, 1986; Johnston, 1997), and independent writing and drawing may reveal any difficulties with the fine motor skills required to produce written language, which could also lead to a decrease in the quantity and quality of what is written (Graham & Harris, 2000b; Graves, 1994; Clay, 1991; Shaughnessy, 1977).

Phonemic awareness, conscious attention to the sound elements of language, has been cited as a critical predictor of later literacy achievement (Adams, 1990; National Reading Panel, 2000; Roberts, 1998; Vellutino, Scanlon, & Lyon, 2000). However, claims that it is a precondition to learning to read have been contested by others who have noted that this ability may in fact grow through participation in literacy events (Clay, 1991; Cunningham & Stanovich, 1991). In addition, the critical requirement of phonemic awareness comes into question in the case of children who are unable to access or utter speech sounds but still become fluent readers (Gioia & Johnston, 2001; Koppenhaver, Spadorcia, & Erickson, 1998). Nonetheless, the weight of evidence suggests that the ability to isolate and manipulate the sound elements of language is fostered through rhyming and word play activities and that the ability to organize this information facilitates literacy acquisition (Adams, 1990; National Reading Panel, 2000). However, even the most enthusiastic endorsement of phonemic awareness instruction, as in the National Reading Panel (2000) report, recommends limits to such training. Specifically, the acquisition of phonemic awareness (a) need not exceed a total of 18 hours, (b) is enhanced when offered in small group settings, and (c) is more effective when tied to letter sound instruction. Thus, the weight of evidence suggests that competency in phonics and phonemic awareness is important and that opportunities for learning them are maximized when interventions are linked to purposeful interactions with print.

Children learn the important technical aspects of print, such as the left-to-right sweep of text and jargon terms such as *author* and *illustrator*, during interactive read-alouds; children also learn the social norms for book sharing in this setting (Klesius & Griffith, 1996; Gioia, 1997).

Through choral reading and multiple readings of favorite stories, kindergartners learn about the relative permanence of print, that text carries a message, and a multitude of other concepts about print (Clay, 1991, 1993; Fountas & Pinnell, 1996; Snow et al., 1998). In addition, these shared events provide young children with access to experiences beyond their immediate setting and a supportive context in which to enhance their language and literacy understandings. Indeed, quality children's literature presents more complex, enriching language structures than are normally available in adult conversation (Stanovich, 1992), a feature that may be especially important for children who exhibit language delays and/or differences (Klesius & Griffith, 1996; Koskinen, Blum, Bisson, Phillips, Creamer, & Baker, 1999).

By first grade, children are expanding their repertoire of strategies for working with text independently. Active meaning-making during reading and writing reflect good teaching (Clay, 1991; Askew & Fountas, 1998). By reading texts of varying degrees of difficulty, students build fluency, become more flexible and effective at employing word-solving strategies, and increase the number of words they are able to identify on sight (Fielding & Roller, 1992; Pinnell & Fountas, 1998). When writing, first graders engage in systematic phonetic analysis and produce increasingly detailed approximations of conventional spellings (Bear et al., 1996). Writing, especially writing activities in which students are encouraged to spell the words "the way they sound" (or what some would call either invented or phonetic spelling), also supports the development of phonemic awareness and even the letter-sound knowledge required in reading (Adams, 1990; Clarke, 1988). In essence, the more print these young readers and writers "process," the more likely they will become independent, self-extending learners (Clay, 1991, 1993; Johnston, 1997; Anderson, Wilson, & Fielding, 1988). While comprehending the message of many of the early texts encountered in first grade does not require sophisticated background knowledge or comprehension acumen, early attention to comprehension, even if in the context of texts that teachers read to children, results in improved comprehension of texts students will read on their own (Pearson & Duke, in press).

The social nature of literacy learning does not diminish with growing reading independence. Instead, the nature of peer-to-peer conversations and teacher-child interactions may become more varied, more complex, and more enriching. The range of interactions need not be limited to recall of explicitly stated facts or to editing changes to conventional spelling; students and teachers can begin to discuss author intentions, writing style, and other literary responses to texts, as well as a host of other topics. The purpose of these conversations is to support students in their quest to become constructors of meaning and owners of the reading and writing processes.

Children who are provided with a multitude of texts from multiple genres learn to "borrow" from the authors they read, and they incorporate stylistic and creative qualities into their own writing. Ideally, these children are learning to read like writers (Fletcher, 1999; Smith, 1983). This metacognitive strategy becomes part of the set of tools for constructing meaning that students acquire as they engage in literate endeavors (Dahl & Farnan, 1998).

As young authors expand their purposes for writing, their process of composing becomes more complex as well as more focused. Drawing and talking, the primary prewriting tactics of young learners, evolve into more detailed, explicit planning (Dahl & Farnan, 1998). Just as "learning to read" shifts to "reading to learn," there is a parallel shift in the role of writing (Many, Fyfe, Lewis, & Mitchell, 1996; Tierney, Sloter, O'Flahaven, & McGinley, 1989). That is, students use writing to explore personal issues, prepare researched presentations, and communicate with an intended audience (Board of Directors, IRA & NAEYC, 1998; Dahl & Farnan, 1998).

As with their very earliest efforts, children continue to engage in a variety of

prereading and prewriting activities designed to facilitate their ability to construct meaning. As the range of their knowledge about language and print evolves and becomes increasingly complex, so too do the planning activities that accompany literate endeavors. For example, prior to reading, students engage in conversations that are designed to rouse and enrich the student's prior knowledge of the text and its content, generate predictions about what will occur next, and generally set a purpose or focus for their efforts. Before writing, teachers frequently invite children to "brainstorm" ideas that will enhance their compositions. First drafts allow children to celebrate initial attempts to convey their thoughts in writing without focusing on perfection in the production of writing conventions. As children grow as readers and writers, their independence is supported through teacher-student modeled lessons of editing as well as through conferences between students or between students and teachers. In addition, students expand their repertoire of reading and writing abilities when they are encouraged to experiment with a full range of themes and genre and are given ample opportunity to exercise decision-making options in their work (Cambourne, 1995; Hansen, 1987; Morrow & Gambrell, 1998; Worthy & McKool, 1996).

When the language and literacy practices from students' homes are embraced and supported by schools, children are more likely to embrace and succeed at school-based literacy tasks (Serpell, 1997; Barone, 1996; Auerbach, 1995; Holland, 1991). Ideally, home and school become complementary environments, with each supporting different faces of literacy development. The home provides occasions for children to see language and literacy at work in everyday experience. The school, by providing extended opportunities for reading and writing along with the instructional scaffolding students need to succeed at new and ever more challenging tasks, helps students realize their aspirations with literate lives.

PART II

Producing Early Literacy Learning: How Teachers Should Teach

This section of the white paper describes how teachers should provide appropriate instruction to build on this understanding of how children learn to read and write. It argues that effective literacy teaching must

- Be broadly supported by school-wide, family, and community efforts.
- Be grounded in a classroom environment that motivates reading and writing.
- Be planned in terms of design, delivery, and evaluation.
- Include explicit, systematic instruction.
- Be responsive to individual needs.
- Involve technology as both a literacy medium and a resource.

Broad Support From School, Family, and Community

Becoming literate begins at an early age and draws upon learning experiences with family members and other caregivers (Morrow, 2001; Neuman & Roskos, 1997). For example, parents can read to their children, using storybooks or other "authentic" reading matter found in their environment, such as menus, newspapers, magazines, cereal boxes, signs, and labels (Purcell-Gates, 1996; Neuman, 1999). By doing this, parents demonstrate the skills and behaviors involved in reading text. Reading to children also emphasizes that reading is important, involves communication and making sense of print, and entails social interactions with others (Cochran-Smith, 1984). When entering school, children encounter more formal learning experiences to ensure that they acquire needed content, skills, and strategies. However, educators still emphasize and build upon the meaning-making, communication, and social aspects of literacy first emphasized in the home (Morrow, 1995). To sustain and maximize this early literacy development, support networks involving school, family, and community must be established.

It is the school's responsibility to provide direction, leadership, and support for children's literacy development. To be effective, administrators and teachers must work together to identify and monitor a school-wide literacy program based on sound theory and research (Tompkins, 1997). This program must be flexible enough to accommodate a variety of different learners, school districts, and communities. A school-wide program must encompass a shared vision and common goals, engage all participants in understanding and promoting the value of literacy, and routinely assess the effects of instruction on student learning. Such a collaborative program is critical for teachers as they work together within and across grade levels, for students as they move from classroom to classroom, and for parents as they support their children's knowledge and skill development.

As noted earlier, the family is a critical support for children's literacy development. The quality and accessibility of preschool experiences with the written word have great impact on a child's preparedness and subsequent success in learning to read and write at school. Once in school, children continue to benefit from the support of parents and other caregivers (Booth & Dunn, 1996). To be effective, teachers must involve parents in the literacy program, communicating the importance of parental support, collaborating on the best methods for meeting the child's learning goals, and using the family as resources for classroom- and school-based experiences involving reading and writing (Teale & Sulzby, 1986). Teachers can work with parents to support literacy learning at home, for example, by asking them to read to and with their child each day. Teachers can further work with parents to support literacy in the classroom by asking parents to serve as classroom volunteers when reading and writing are taught. Teachers also need to recognize that families from various cultures understand and use literacy in different ways and to accommodate these understandings and uses to make their literacy instruction more effective (Taylor & Dorsey-Gaines, 1988; Valdes, 1996).

The community is also a valuable resource for supporting literacy development. Those interested in children's education, such as individuals in local business and service agencies, can be involved in school and classroom reading and writing activities as well as in adult literacy programs. Their involvement can range from sponsorship of literacy projects (e.g., Pizza Hut has sponsored a summer book-reading campaign) to working as a classroom volunteer or tutor (Wasik, 1998).

Conducive Classroom Environment

In addition to broad school, family, and community support, the teacher must create a classroom environment that is conducive to literacy learning. This learning community will engage students and motivate them to observe, explore, and become owners of literacy processes. While the teacher retains overall responsibility for the class, the students and teacher work together for the common good of the community, even in the areas of instruction and assessment that have traditionally been only the teacher's domain (Tompkins, 1997). As students accept responsibility for learning, they are more easily engaged in reading and writing activities that involve choice and personal response (Cunningham & Allington, 1999). They are also provided with opportunities for social interactions designed to support their reading and writing development. This may include activities such as "author's chair" in which children share their writing with the class, peer-assisted learning in which pairs of children practice skills taught by the teacher, or a book club in which students read and discuss the same book.

In a conducive literacy environment, children read and write every school day. They read and write independently, with each other, and with help from the teacher. Children also discuss and think about what they read as well as share and discuss what they write. Their classroom is well supplied with reading and writing materials, and

children's literacy work is prominently displayed (Hansen, 1987).

Systematically Planned Program

An essential feature of effective literacy instruction is that it is carefully crafted and designed (Baker, Dreher, & Guthrie, 2000; Pressley, 1998). Teachers establish goals for what their literacy program will achieve, develop plans for meeting each of these goals, and systematically monitor their progress and their students' progress in meeting these objectives. Their goals and the plans for meeting them reflect and support the broader school-wide and district-level efforts and are based upon current knowledge about literacy learning and effective literacy instruction. Planning occurs at every level of an effective literacy program, ranging from general decisions about items such as overall objectives, materials to be used, and classroom rules to more daily and immediate concerns such as how to adjust instruction to meet the needs of children who are experiencing difficulties.

One of the primary foundations upon which an effective literacy program is built is an adequate amount of time allocated to teaching reading and writing (Graham & Harris, 2000a). This includes using reading and writing as a tool for gathering, analyzing, and sharing information in content area classrooms such as science and social studies (Morrow, Pressley, Smith, & Smith, 1997; Roehler, Fear, & Herrmann, 1998). Despite the obvious importance of this maxim, schools do not always allocate sufficient time to reading and writing instruction. For example, very little attention is devoted to writing in some elementary schools. One study of 10 schools found that children spent only about 30 minutes of the whole school day writing. Very little of this time was spent composing text, as most of it involved practicing spelling words, writing numbers during math, and so forth (Christenson, Thurlow, Ysseldyke, & McVicar, 1989).

Not only do children need to read and write daily, but their reading and writing should cover a broad range of materials and topics (Graham & Harris, in press; Pikulski, 1994) and include narrative as well as expository materials (Dreher, 2000). It is particularly important that the material selected for reading be at the appropriate level for each child. Reading performance is enhanced when children work with suitable material, as they not only comprehend more but are more engaged when reading (Chamblis & McKillop, 2000). Similarly, writing is more engaging and interesting to students when it serves a real purpose and is aimed at a real audience (Vacca & Rasinski, 1992).

A second foundation upon which an effective literacy program is built is instruction in the knowledge, skills, and strategies children need to become skilled readers and writers (Cunningham & Allington, 1999; Moats, 1999; National Reading Panel, 2000; Snow et al., 1998). In planning a literacy program, it is critical that teachers strike an appropriate balance between such instruction and the students' opportunities to read and write (Dahl & Freepon, 1991). In programs that emphasize one approach to the virtual exclusion of the other, many children will not learn all they need to know to become skilled readers and writers (Delpit, 1988).

When planning a literacy program, effective literacy teachers consider how they can make reading and writing motivating for all students (Baker et al., 2000; Pressley, Rankin, & Yokoi, 1996). Strategies include setting an exciting mood, selecting materials based on students' interests, allowing students to select reading materials and writing topics, reinforcing students' accomplishments, specifying the goals for each lesson, and promoting an "I can do" it attitude.

Explicit and Systematic Instruction

Literacy development depends upon the acquisition of the skills, strategies, and knowledge that provide the underpinning for effective reading and writing. Although some of these fundamental elements may be acquired, at least in part, by practicing reading and writing frequently, others must be explicitly and systematically taught to

ensure that all children become competent readers and writers (Graham, 2000; Morrow, 2001; Neuman, Copple, & Bredecamp, 2000; Palinscar & Klenk, 1992). There is no one-size-fits-all approach to accomplish this goal, but there is an extensive research base that delineates the skills children must learn in order to read well (Armbruster & Osborn, 2001). Instruction in literacy focuses on helping students develop the basic cognitive and language-related skills necessary for efficient learning. These skills include speaking, listening, decoding, knowing word structure and vocabulary, comprehension, handwriting, spelling, and composing. To be effective at constructing meaning, for example, it is important that children have the appropriate decoding, word recognition, and vocabulary skills in place (Block & Pressley, 2002; Snow et al., 1998).

Explicit instruction involves methods such as modeling, direct explanation, and guided practice. *Systematic instruction* refers to teaching needed skills, strategies, and knowledge in an organized, sequential fashion. It is the process of knowing what should be taught and when.

Explicit and systematic instruction in skills and strategies should have a comprehensive balance of the following:

- Phonological awareness instruction, including the teaching of phonemic awareness, meaning the smallest sound units composing spoken language (Ericson & Juliebo, 1998; National Reading Panel, 2000; O'Connor, Jenkins, & Slocum, 1995). This awareness includes knowing that words are made up of individual speech sounds and patterns as well as knowing how to work with or manipulate the sounds in words.
- Phonics instruction, including teaching useful letter-sound relationships as well as how to apply these skills when reading (Adams, 1990; Chall & Popp, 1996; National Reading Panel, 2000).
- Spelling instruction, including the teaching of useful sound-letter relationships, spelling patterns and generalizations, and the correct spelling of words commonly used by young writers (Gentry & Gillet, 1993; Graham, Harris, & Fink, in press).
- Handwriting instruction, including teaching how to form and fluently produce the letters of the alphabet (Berninger et al., 1997; Graham & Harris, 2000a; Jones & Christensen, 1999).
- Vocabulary instruction that involves exploring the relationships among word structure, origin, and meaning as well as how to use knowledge of word parts and context to identify the meaning of words in text (McKeown, Beck, Omanson, & Pople, 1985; National Reading Panel, 2000)
- Reading fluency instruction designed to help children read text accurately and fluently (Dowhower, 1987; National Reading Panel, 2000)
- Comprehension strategy instruction, including teaching strategies for constructing meaning and analyzing text (Block & Pressley, 2002; National Reading Panel, 2000; Pearson & Dole, 1987). These strategies include predicting outcomes, understanding main ideas and supporting details, being aware of narrative and expository text structure, monitoring text understanding, drawing inferences, utilizing background knowledge, questioning the author's purpose or intent, clarifying information, and summarizing for meaning.
- Writing strategy instruction, including teaching strategies for planning, evaluating, and revising text (Englert et al., 1991; Harris & Graham, 1996). This instruction also involves teaching strategies to support creative writing, writing for a purpose, writing from sources, writing to learn, writing for reading, and writing from frames for different types of text.
- Independent daily reading and writing that offer exposure to a variety of genres with a primary focus on enhancing children's reading and writing interests, background knowledge, vocabulary, fluency, and the reading-to-writing connection (Morrow, 1995).

Effective explicit and systematic instruction requires that teachers ensure that children are aware of why they are learning specific skills, strategies, and knowledge to help them construct meaning when reading or writing (Cunningham, 1990; Harris & Pressley, 1991). Students must also learn when and where to use what they have been taught. Furthermore, phonological awareness, phonics, handwriting, spelling, and other literacy skills must be taught to the point that they become automatic enough to support rather than hinder the reading and writing process (Stahl, Heubach, & Crammond, 1997; Graham & Harris, 2000b). Likewise, instruction must be designed so that children learn to use reading and writing strategies in a flexible and intelligent manner and apply them appropriately across different types of literacy and learning tasks and contexts (Garner, 1990).

It is important to note that explicit and systematic instruction does not need to occur in isolation from the rest of the literacy or daily curriculum (McIntyre & Pressley, 1996; Young, Righeimer, & Montbriand, 2000). Instead, such instruction should involve students in an interactive engaged process that teaches them how to use their skills, strategies, and knowledge when reading and writing.

Responsiveness to the Needs of Each Child

If all children are to become skilled readers and writers, instruction must be tailored to meet the individual needs of students, especially of those who find reading and writing challenging. One way that teachers can respond to individual differences is to modify their basic teaching routines to make them more responsive to the needs of all children (Fuchs, Fuchs, & Bishop, 1992). Such modifications must be based on a careful evaluation of the tasks to be taught, the characteristics of the students, and the success of the procedures used in previous lessons. Examples of adjustments that teachers might make in their instructional routines include changes in teaching style, pacing, instructional procedures, grouping arrangements, amount of individual assistance, and the skills or strategies targeted for instruction (Vaughn, Schumm, Niarhos, & Daugherty, 1993).

In addition to systematic and planned modifications in their teaching routines, teachers also need to make more spontaneous adaptations, such as taking advantage of "teachable moments" that occur in the classroom (Atwell, 1987). By monitoring children's performance during reading and writing lessons, teachers can provide students with additional help when they need it. This may involve a simple reminder to use a specific skill or strategy, helpful hints designed to direct students' thinking, or reteaching a concept introduced earlier.

When adapting instruction, effective literacy teachers identify "roadblocks" that impede children's success in learning to read and write (Gaskins, 1998). Such obstacles may include frequent absences, poor home support, attention difficulties, disorganization, inflexibility, lack of persistence, and so forth. Successfully addressing these roadblocks increases the likelihood that each child will learn to read and write.

Children in schools in the United States come from a wide variety of backgrounds, languages, and cultures. This diversity should be taken into account when designing and adapting reading and writing instruction (Au & Asam, 1996; Reyes, 1992). Effective literacy teachers are sensitive to language, cultural, and background differences involving discourse patterns, interaction styles, literacy experiences at home, and views concerning the role of the teacher. Failure to consider these factors can undermine the effects of the literacy program.

It is equally critical that all children be afforded the opportunity to learn to read and write, including children with significant cognitive, language, perceptual, and physical challenges. With the ongoing development of new technological supports and systems, some of these children can now participate in a much wider range of literacy opportunities. For example, the road to literacy for a 6-year-old child with

cerebral palsy who could not speak was advanced through a Touch Talker, a dedicated communication device that provides speech output using a programmable system with a keyboard (Erickson & Koppenhaver, 1995). Initially, a variety of books that the child liked were programmed into the Touch Talker so that the selection of just two icons produced a reading of the book. Later, the Touch Talker was programmed so that the icons could be used to read word by word.

Finally, schools need to provide extra, intensive, and early instruction to children who experience considerable problems learning to read and write (Snow et al., 1998). The basic goal of this additional instruction is to help struggling readers or writers catch up with their peers early, before their difficulties become more intractable (Kameenui, 1993; Slavin, Madden, & Karweit, 1989). Such programs seek to accelerate the progress of struggling readers or writers by providing them with additional instruction or literacy experiences. This often occurs either in a small group or through one-on-one tutoring and includes programs such as special education assistance, reading recovery, book buddies, and so forth (Invernizzi, Rosemary, Juel, & Richards, 1997; Pinnell, 1989; Wasik & Slavin, 1993). For these programs to be maximally effective, there must be careful coordination of services so that the supplementary program and the regular classroom literacy program work together (Pikulski, 1994).

Use of Technology to Support Reading and Writing Development

Schools need to use technology to facilitate and support children's reading and writing development. This goal transcends using technology as a tool for word processing, e-mail, and other basic functions, although these functions are useful for communicating and transmitting literacy. Technology also provides a powerful and interactive tool for children to experience learning from a variety of domains. These domains include researching the world around them; researching important information; learning from others; learning and exploring as an individual; learning from experts in any given field; and using interactive computer programs to practice reading, vocabulary, writing, critical thinking, and study skills.

There are many benefits from technology use in reading and writing instruction (Willis, Stephens, & Matthew, 1996). For instance, interactive computer software and other technological devices can promote literacy learning through the use of immediate feedback, self-correction activities, tutorials, practice drills, diagnostic evaluative assessments, and online help. In addition, the use of electronic text as part of the curriculum provides variety, interest, relevance, in-depth understanding for comprehension, and engagement in the learning act for children (Vacca & Vacca, 1999). For example, electronic text can be easily manipulated, making it more responsive than print to some children's interests, needs, and purposes for reading and writing. Electronic text also provides a wide range of information resources and search capabilities, enhancing children's research and information gathering skills. Telecommunication networks increase children's opportunities to interact and collaborate with others during literacy learning. Finally, multimedia electronic environments can provide images, sounds, and interactive texts that are highly engaging and can help expand children's understanding of the concepts being taught. Thus, technology can enhance reading and writing development by providing interactive visual and auditory tools that support the mastery of critical literacy skills and strategies.

Interactive visual and auditory technology tools and resources can further support the development of concept learning, content learning, brainstorming, problem solving, and socially mediated learning (i.e., children actively collaborate in their efforts to construct meaning as part of the literacy learning environment). The use of technology helps create an environment that promotes multidimensional learning to meet the different learning styles and needs of all children across the reading and writing curriculum.

PART III

Preparing Effective Teachers of Literacy: What Teacher Preparation Programs Need to Do

Summary of Parts I and II

Parts I and II of this white paper discussed how children become literate and the teaching strategies that ensure literacy learning for all children. To translate the implications of these findings for teacher preparation programs, the following eight summary points should be noted:

- It is generally accepted that by participating in carefully planned instruction, students will acquire a rich infrastructure of knowledge and skill that will enable increasingly more complex and sophisticated literacy performances. The school, by providing extended opportunities for reading and writing along with the instructional scaffolding students need to succeed at new and ever more challenging tasks, helps students realize their aspirations by leading literate lives. This planned instruction must address phonological awareness, phonics, spelling, handwriting, vocabulary, comprehension, writing strategies, and reading fluency. Most differences among theorists of reading acquisition revolve around how to *teach* these elements, not whether readers do or should *learn* them.
- Children learn the value and functions of print by observing its use by more sophisticated readers and writers. Young learners must have opportunities to engage actively in a variety of purposeful literate endeavors, including occasions to read, write, and talk about text with a knowledgeable mentor and a program of planned, systematic literacy instruction. Cunningham and Hall (1998) promote dividing the time for literacy instruction evenly among guided reading, writing, working with words, and self-selected reading, allowing 30 minutes per block of instruction.
- Children gain literacy skills more easily in a classroom environment that motivates both reading and writing and that demonstrates the connection between the two.
- Quality children's literature presents more complex, enriching language structures than is normally available in adult conversation. Teachers must be knowledgeable of the variety of literature available to meet individual student interests and that provides a broad perspective of the world that reflects the culture and economic situation of all children in the classroom, the surrounding community, and beyond.
- Effective literacy teachers are responsive to individual student learning needs, and ready to modify planned teaching routines. Teachers must be skilled in assessment strategies as they plan appropriate instruction for effective literacy learning. Assessment should be continuous and an integrated part of instruction. Only when each student's strengths and weaknesses are recognized and appreciated can student-centered instruction occur successfully.
- Effective literacy instruction involves using technology both as a literacy medium and as a resource.
- Teacher expectations are almost as important as student skill learning and experiences. Children are more likely to achieve literate competence when their teachers expect that they will succeed.
- Ideally, home, school, and community become complementary environments, with all supporting different facets of literacy development.

Implications for Teacher Education

What, then, are the implications of these findings for teacher education?

Teacher preparation programs must ensure that reading methods courses prepare future teachers to teach many methods of reading. These must include the ability to provide direct reading instruction, understand the needed balance between word recognition and comprehension strategies and skills, promote the connection between

reading and writing, provide motivating and quality literature, and ensure that students have the time needed to engage in the act of reading. Because a variety of methods are needed, phonics instruction should be part of the process of teaching reading but not the entire process. The International Reading Association (2000) warns, "Programs that center on one part of the literacy equation at the expense of others train readers who may be unable to understand or enjoy what they read. Instead of focusing narrowly on one aspect of the problem or one instructional strategy, educators and policy makers need to take a broader view" (p. 2). Inherent in teacher education programs that provide exemplary reading methods courses is a focus on the pedagogical implications of different methods of teaching reading (e.g., phonics-based, whole language, literature-based, etc.) and knowledge of the various philosophical paradigms for reading instruction. This focus ensures that preservice teachers enter the field with a clear understanding of working with and adjusting instruction for culturally and socioeconomically diverse learners as well as learners with special needs and English-language learners. In short, teacher preparation programs must prepare their candidates to teach all methods of reading. Students learn in many different ways and arrive at school with varying levels of skill, and teacher candidates must be prepared to meet the reading needs of all their students.

The understanding of issues related to diversity is vital to effective literacy instruction. All aspects of literacy instruction should include consideration of cultural differences, the special learning needs of children, and the dialect and language system that all learners bring to the educational setting. Diversity affects language acquisition, language use, the ability to hear and manipulate sounds within a language, vocabulary development, written expression, listening vocabularies, and oral language (Burns, Roe & Smith, 2002). Diversity also has implications for how teachers address schema for the development of comprehension strategies and for assessment.

Associated with understanding the relationship between literacy and diversity is recognizing the special considerations that must be in place for students whose first language is not English. Reports from the National Assessment of Educational Progress (1995) indicate that the reading failure rate for limited English- speaking students is extremely high. Many times such students have multiple risk factors, such as parents who are poorly educated, living in low-income communities, and others, which further compound the difficulties they face in learning to read. While many approaches exist for helping English language learners acquire reading skills in English, research indicates that these students should be taught to read in their native language first (Allen, 1994; Flood Lapp, Tinajero & Hurley, 1996/1997; Schifini, 1994). This approach is particularly effective for children who already speak some English. By learning to read their native language first, these students can continue to develop oral English language skills as they begin to recognize similarities in the reading process from one language to another and can more readily transfer those skills and strategies. For those children who speak little or no English and where neither teachers nor materials exist to assist those students in learning to read in their native language, the focus should be on proficient oral English language use before formal reading instruction can occur (Burns, Griffin & Snow, 1999).

Regular classroom teachers, reading specialists, and special education teachers must be fluent in their understanding and use of the sound system of the English language. They must understand and be able to apply all word recognition strategies, know when each strategy and skill is applicable, and be able to help students learn how to manipulate letters, sounds, rhyming words, and word families and how to decode words they do not recognize immediately. Teacher education programs must prepare future teachers in related

skills such as building sight-word vocabularies, analyzing words based on spelling patterns and word parts, and using writing to enhance the understanding of the connection between letters and sounds. Pressley (2002) cites studies that indicate "there is very clear and positive association between the extent of a reader's vocabulary and her or his comprehension skills" (p. 267). Teacher education programs need to ensure that teacher candidates possess these skills and learn how to create appropriate environments through participation in and observation of such teaching and learning in simulations and field experiences.

Teachers should enter the workforce with the ability to provide sound vocabulary instruction. Pressley et al. (2001) provide models for preservice and inservice teachers as they describe vocabulary instruction for words that "were not taught as isolated 'tricks' to be memorized or used on a worksheet, but were integrated into the context of engaging activities" (p. 122). Ignoring the age-old "look the words up in the back of the book and write down the definitions" that most students have experienced, new methodologies are much more effective for long-term recall of words. Suggesting possible definitions, making verbal-visual illustrations of words, translating definitions into the student's own words, creating new sentences, and repeated exposure to new words all serve as exemplary methods for acquiring new vocabulary (Gambrell, Morrow, Neuman, & Pressley, 1999). Language-rich classroom practices that include reading aloud; discussions of new words; connecting new words to students' background knowledge; the use of structural analysis, context clues, and reference books; and vocabulary instruction through the curriculum all aid vocabulary growth and development (Burns, Roe, & Smith, 2002). Again, teacher candidates need to engage in these strategies as part of their preparation.

Training in providing sound spelling instruction must be included in reading methods and language arts courses in undergraduate programs. Using student writing samples to assess strengths and weaknesses in standard spelling and allowing those assessments to lead instruction should be presented as exemplary methodology. Issues relating to communication with parents, individualized spelling programs, and spelling assessment strategies should also be included in preservice programs of study with the reading and language arts courses.

Preservice reading methods and language arts courses should dedicate ample amounts of time to the writing process, making sure that all future teachers understand theories, research, and best practice as they relate to writing instruction. Teacher candidates should learn how to provide explicit instruction in strategies critical for each phase of the writing process, including prewriting, drafting, revising, and editing. An essential key to providing exemplary writing instruction is for teacher candidates to engage in their own writing process … to view themselves as writers, to experience the types of frustrations that P-12 students experience when they write, and to use those experiences to help their students develop strategies for working through tough pieces of writing and to find their own voice in their work. Teacher education programs should ensure that preservice teachers experiment with a variety of writing strategies.

Inherent in sound writing instruction is understanding how to provide constructive feedback and how to alert students to problem areas in their writing that need to be improved. Teachers must be able to provide this feedback without inhibiting the child's desire to continue writing. Safe, noncritical classroom environments must exist if students are to have the freedom of self-expression in print. Teacher education programs must include instruction in how to set up and maintain a supportive, nonthreatening classroom atmosphere that encourages risk taking. Preservice teachers who have been engaged effectively in the writing process themselves can evidence their own enthusiasm for writing and the writing process to children.

Facilitating the ability to communicate thoughts fluently in writing is the ability to write legibly. Preservice teachers should receive instruction in methods and sound pedagogy related to handwriting instruction, which include consistency, modeling, and demonstrating. Handwriting should not be viewed as a skill separate from the other language arts. Instead, handwriting skills should be taught within the greater context of the writing process so that, with ample opportunities to practice, students are able to "overlearn" standard formations of letters until the process becomes automatic. This fluency in handwriting allows students to focus on thoughts, ultimately providing higher quality writing samples. Another important aspect of handwriting instruction is the ultimate success that good handwriting brings to students in the form of grades. Many times teachers view good handwriting as an indication of quality work. Students with poor handwriting receive lower scores than students with better handwriting even when the quality of the content is the same (Markham, 1976). Preservice teachers must enter the workforce confident in their abilities to provide sound handwriting instruction to all students.

Each preparation program must ensure that teacher candidates are sufficiently knowledgeable about the process of sharing literature, including an in-depth knowledge of quality literature and of the process of engaging children in the reading process. Without knowledge of how to share literature and without a repertoire of quality literature for young readers, teacher candidates will be unable to demonstrate an excitement for quality literature and the joy of reading for students.

Preservice teachers need a strong children's literature course that provides the foundation for the use of quality literature throughout the curriculum. Some successful programs have divided children's literature into two separate courses, one addressing literature for infants, toddlers, and preschoolers and the other addressing the more traditional elementary grades of 1 through 6. This division is particularly helpful in addressing emerging literacy needs and the possibilities that exist for very early use of text and oral reading with young children. No matter how the course or courses are defined, teacher education programs must ensure that future educators have access to award winning and highly noted children's literature in their course work. Specific strategies must be taught so that new teachers enter the classroom knowing how to read aloud effectively and how to use literature as a springboard for writing, for oral language development, and for cross-curricular studies. Reading methods courses must include strategies for matching students with books that are of appropriate interest and difficulty level for each of them. New teachers must be fluent in genre, significant authors, and leading research as they relate to the use of quality literature in reading instruction.

Teacher candidates must be able to evaluate and assess student literacy knowledge in order to plan instruction effectively, particularly instruction that takes into account individual students learning needs. The ability to evaluate student knowledge and, specifically, literacy learning skills is typically addressed through training in the assessment of reading, writing, speaking, and listening skills. These assessments should include both formative and summative evaluations, including running records, informal reading inventories, anecdotal records, portfolios, and diagnostic instruments. This may be addressed through a separate course in the curriculum or through inclusion in several literacy methodology courses, but demonstrated knowledge of literacy assessment is essential for teachers. Valencia and Wixson (2000) report that assessment in literacy instruction is becoming more political in nature, demanding that teachers understand not only the many assessment options available to them but also how those assessments impact instruction.

Teacher candidates also must possess strong technology skills that prepare them for sophisticated applications of technology in the literacy-rich classroom. They must

be provided with experiences to use technology in literacy-applicable ways during their preservice instruction. These should produce familiarity with both software and hardware that support children's literacy development.

An essential role of schools, departments, and colleges of education is to ensure that those admitted into teacher preparation programs possess an enthusiasm for literacy that will allow them to exhibit an excitement for reading, for literature, and for all literacy activities. The value of candidates' disposition toward their teaching is reflected in national standards for both accreditation (see Appendix B) and licensure (see Appendix A). Part of this disposition for teaching is an enthusiasm about the subject area, literacy in this context, and the ability to communicate this enthusiasm to students.

Teacher candidates must be provided with experience in working with community-linked literacy programs and must learn about the value of family literacy techniques. They must be prepared to work with parents, caregivers, and the broader community to ensure early literacy success for children.

Design of Teacher Education Programs

Rather than recommending an appropriate number of reading or literacy instruction courses, the necessary number of credit hours of work, specific faculty qualifications, or candidate assessment issues, the focus council emphasizes that it is the *content* of the course work that is significant, and teacher education programs should be designed, however is necessary, to ensure candidates knowledge and performance in teaching reading.

Teacher preparation programs must ensure that reading and writing methods courses prepare future teachers to know many approaches to literacy instruction, in other words, the "combination of methods" recommended by the National Reading Panel. Their methodology courses should be broadly defined to include the various aspects of language, or literacy, including an emphasis on the connection between reading and writing and significant knowledge about quality literature to use in the reading process. Course work should also familiarize the candidate with the array of early literacy programs including intervention programs such as Reading Recovery and Success for All. Paramount to the success for any teacher education program in preparing teachers to provide sound literacy instruction is the aspect of field experiences. Textbook instruction in theory and practice provides the foundation for literacy instruction, but practical application of this theory and the opportunities to work with literacy learners at many levels of proficiency enables preservice teachers to fully understand reading methods and how to adjust instruction to fit learners needs.

Teacher preparation course work must include instruction in all aspects of language usage, including vocabulary building skills, letter and sound connections, spelling, and comprehension. Teacher candidates must learn how to build language-rich classrooms for young readers, and such classrooms should be modeled for them in their own college-level instruction, either in a literacy course as a part of the teacher preparation program or through specifically planned field or clinical experiences that include instructional experiences in language-rich early-grade classrooms. Modeling is of supreme importance if teachers are to be prepared as highly effective language users and language teachers.

Diversity is an ever-increasing challenge to literacy instruction. Au (1993) suggests that teachers use "culturally responsive instruction: that is "consistent with the values of students' own cultures and aimed at improving academic learning" (p.13). Courses and field experiences should provide sound training in how to value all students, their native languages and usage, and how to support these students as they learn to read and write. Preservice teachers must know what research suggests as best practice regarding when and how reading instruction should be presented to Limited-English-proficient students. Courses

must prepare teachers to be able to work with second language learners by demonstrating how to involve parents, encourage risk taking, provide meaningful feedback, use alternate forms of assessment, provide authentic experiences, and incorporate children's literature as a means of modeling the act of reading, expanding vocabularies, and enhancing concept development (Allen, 1994; Au, 1993; Cummins, 1994; Fitzgerald, 1993).

Teacher preparation programs must ensure that preservice teachers actually spend time in the writing process themselves and have the skills to provide explicit instruction in each phase of the writing process, including handwriting. They must understand the strategies necessary for composing, evaluating, discussing, and editing their own writing, in collaboration with their peers and with their instructor. They must have significant experience in completing final well-written documents. This need to be writers themselves impacts not only teacher preparation course work but also general education courses. Courses in writing and in literature that are required of early literacy teachers must involve them in specific, structured writing projects. In like manner, general education courses in linguistics, in aspects of the history of the English language can help to address understanding of word and language usage. Furthermore, in preparing teachers for contemporary classrooms, teacher preparation programs will be well advised to include at least one English as a Second Language course and at least 1 year of foreign language study for all teacher candidates.

Once teacher candidates move to literacy instruction in teacher education courses, faculty must model the skills candidates will need as early literacy teachers. By becoming students and learners themselves, candidates learn to provide appropriate instruction, guidance, and feedback for their students. Additionally, as a part of this process of becoming literacy learners themselves, teacher candidates must understand the threatening aspects of this risk-taking, such as of exposing their own writing to the scrutiny of their peers. By providing them a safe, nonthreatening, and encouraging environment in which to write, college faculty are also modeling the kind of environment these teacher candidates must provide for young children as emerging writers.

Recognizing that literacy is not just memorizing new vocabulary words, their definitions and spelling, neither is it learning only letter sounds and patterns. Preservice teachers must gain significant experience in the actual reading process and learn how to engage young learners in reading. General education course work in literature must be planned to engage these students directly with literature, to stimulate their evaluation of literature, and to involve them in discussion about the literature with peers in the classroom. In teacher education, courses such as children's literature must provide candidates with knowledge about quality literature and emerging and classic works and authors, including information about awards such as the Caldecott and Newbery Awards given by the American Library Association and the Coretta Scott King Awards. They must learn about the multitude of web sites that provide continually updated information about books for children. They must learn how to link children with specific books that will be most exciting to them and particularly that speak to their own life interests and/or the world around them. In addition to providing this knowledge of quality children's books, teacher preparation programs must directly engage candidates in discussing children's books, in maintaining literature logs, in establishing reader response groups, and other such activities. Finally, preservice teachers must develop an enthusiasm for quality children's literature and realize the pure joy of reading with and to children. Some teacher preparation programs have found it easiest to achieve the goal of linking literature knowledge with actual reading by pairing the traditional first reading or literacy instruction course with the required children's literature course. Thus, learning can easily overlap, and field experience involving these preservice

teachers in reading to young children can be naturally planned.

It is essential that teacher candidates learn specifically how to assess the literacy knowledge level of students who will be in their classrooms and, having determined this knowledge level, be able to continuously assess their literacy learning. This knowledge can be gained through a specific literacy assessment course or through integration of assessment lessons into other literacy course work. The typical tests and measurements courses are not sufficient, although they may provide some groundwork for literacy assessment. Often assessment skills are taught in a second and more advanced literacy course in teacher preparation programs. Again, there must be an emphasis on assessing the literacy learning needs for all children and an understanding their varied learning styles and abilities, their family and economic backgrounds, and their language skills. This knowledge of assessment must also be linked to the ability to plan appropriate instruction that will meet the identified needs of all children in an early-literacy classroom.

Technology skills, as with reading and writing skills, should begin as a part of the general education program planned for teacher candidates. Candidates must possess strong technology skills before admission into teacher education courses in which they will learn to apply these skills for literacy instruction. The ability to use technology in education facilitates literacy instruction in the areas of "writing and composition, hypermedia, multimedia, work with special populations, motivation, and collaboration" (Leu, 2000, p. 783). Multimedia software programs specifically designed to address reading and language skills provide teachers with many options for including literacy learning experiences with technology. These programs offer students opportunities to interact with print and practice various reading and writing skills and strategies, and they allow teachers to provide instruction that is geared specifically for the needs of each learner. Teacher education programs must prepare preservice teachers with the personal technology skills necessary to evaluate, utilize, and integrate technology into their literacy instruction.

Conclusion and Summary of Recommendations

Teacher preparation programs must integrate the use of research articles into coursework for preservice teachers, introducing them to the best journals and publications and encourage their continuing use of such resources. It is also important that preservice teachers be encouraged and assisted in attending local, state, regional, and national conferences, again with the intent that such attendance will be valued and continued once students have graduated and are in their own classrooms. Colleges and universities can also invest funds in bringing well-respected figures in the field of literacy learning to their campuses, where preservice teachers can attend their lectures and interact less formally with them in small sessions. Collaboration with school districts can help to support such speakers, as can college and university efforts to endow a lecture series to provide support for planned, ongoing professional development.

Reemphasizing that the content of the coursework and evaluation of teacher candidates' knowledge is more significant than the number or required credit hours of reading courses in literacy teacher education programs, the following bullets may help to summarize the Focus Council's recommendations. Effective preparation programs for literacy teachers should ensure that the following areas are included and evaluated during the program.

- Reading and writing methods courses must prepare future teachers to know many methods of literacy instruction, i.e., "combination of methods."
- Methods courses must be broadly defined to include the various aspects of language and literacy.
- General education course work in literature must engage potential literacy teachers directly with literature as

students themselves, learning to evaluate literature and discuss literature with peers.

- Methods courses must include an emphasis on the connection between reading and writing.
- Course work must include significant knowledge about quality literature, including classic and contemporary works and authors, information about awards, and available Web sites.
- Courses should expose teacher candidates to an array of early literacy programs, including intervention programs.
- Field experiences should provide practical application of theory and opportunities to work with literacy learners at many levels of proficiency. These experiences must enable preservice teachers to fully understand reading methods and how to adjust instruction to fit learner needs.
- Course work must include instruction in all aspects of language usage, including vocabulary building skills, letter and sound connections, spelling, and comprehension.
- College-level instruction and field experiences must include modeling of language-rich classrooms.
- Courses and field experiences should provide strong training in how to value all students, their native languages and language usage, and methods to support these students as they learn to read and write.
- General education and methods courses must provide extensive experiences in the writing process in safe, non-threatening, and encouraging environments, so that candidates view themselves as writers.
- Programs should include at least one English as a Second Language course and at least one year of foreign language study for all teacher candidates.
- Methods courses should include information and practice in assessing the literacy knowledge level of students and ensure that teacher candidates be able to continuously assess literacy learning and use assessments to plan appropriate instruction that will meet the identified needs of all children in an early literacy classroom.
- Beginning in general education coursework and continuing throughout teacher education programs, colleges and universities must prepare preservice teachers who possess the personal technology skills necessary to evaluate, utilize, and integrate technology into their literacy instruction.

Ultimately, there is no one model for effective preparation of early literacy teachers, but there are essential elements of course content and field or clinical experience that must be included in any effective program for such preparation. Examples of effective literacy models at selected colleges and universities are included in Appendix C.

Appendix A
Model Standards
Interstate New Teacher Assessment and Support Consortium

Standard 1 – Knowledge of Subject Matter

The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) s/he teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

Standard 2 – Knowledge of Human Development and Learning

The teacher understands how children and youth learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

Standard 3 – Adapting Instruction for Individual Needs

The teacher understands how learners differ in their approaches to learning and creates instructional opportunities that are adapted to learners from diverse cultural backgrounds and with exceptionalities.

Standard 4 – Multiple Instructional Strategies

The teacher understands and uses a variety of instructional strategies to encourage the students' development of critical thinking, problem solving, and performance skills.

Standard 5 – Classroom Motivation and Management Skills

The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.

Standard 6 – Communication Skills

The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Standard 7 – Instructional Planning Skills

The teacher plans and manages instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Standard 8 – Assessment of Student Learning

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of his/her learners.

Standard 9 – Professional Commitment and Responsibility

The teacher is a reflective practitioner who continually evaluates the effects of her/his choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Standard 10 - Partnerships

A teacher communicates and interacts with parents/guardians, families, school colleagues, and the community to support the students' learning and well being.
http://www.luc.edu/schools/education/tchred/intasc.html

Appendix B
NCATE Program Standards and Matrix
Specialized Reading Professional—International Reading Association

Program standard	Evidence: performance data, experiences, courses	Institution's competency level (A,B, or C)
KNOWLEDGE AND BELIEFS ABOUT READING		
1.0 Theoretical Base The reading professional will:		
1.1 demonstrate recognition that reading should be taught as a process;		
1.2 demonstrate an understanding and respect for cultural, linguistic, and ethnic diversity in the teaching process;		
1.3 demonstrate an understanding of the importance of literacy for personal and social growth;		
1.4 illustrate that literacy can be a means for transmitting moral and cultural values;		
1.5 demonstrate an understanding of reading as the process of constructing meaning through the interaction of the reader's existing knowledge, the information suggested by the written language, and the context of the reading situation;		
1.6 demonstrate an understanding of the major theories of language development, cognition, and learning; and		
1.7 demonstrate an understanding of the impact of physical, perceptual, emotional, social, cultural, environmental, and intellectual factors on learning, language development, and reading acquisition.		
2.0 Knowledge Base The reading professional will:		
2.1 demonstrate an understanding that written language is a symbolic system;		
2.2 demonstrate an understanding of the interrelation of language and literacy acquisition;		
2.3 demonstrate an understanding of principles of new language acquisition;		
2.4 demonstrate an understanding of phonemic, morphemic, semantic, syntactic, and pragmatic systems of language and their relation to the reading and writing process;		
2.5 demonstrate an understanding of the interrelation of reading and writing, and listening and speaking;		
2.6 show that students need opportunities to integrate their use of literacy through reading, writing, listening, speaking, viewing, and representing visually;		
2.7 demonstrate an understanding of emergent literacy and the experiences that support it;		
2.8 demonstrate an understanding of the role of metacognition in reading and writing, and listening and speaking;		
2.9 demonstrate an understanding of how contextual factors in the school can influence student learning and reading (e.g., grouping procedures, school programs, and assessment);		

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2.10 show how past and present literacy leaders contributed to the knowledge base;		
2.11 show an understanding of relevant reading research from general education and how it has influenced literacy education;		
2.12 teach classic and contemporary children's and young adults' literature, and easy-reading fiction and nonfiction for adults, at appropriate levels;		
2.13 illustrate the importance of giving learners opportunities in all aspects of literacy (e.g., as readers, writers, thinkers, reactors, or responders); and		
2.14 show that goals, instruction, and assessment should be aligned.		
3.0 Individual Differences **The reading professional will:**		
3.1 illustrate how differences among learners influence their literacy development;		
3.2 demonstrate an understanding and respect for cultural, linguistic, and ethnic diversity in the teaching process;		
3.3 show that spelling is developmental and is based on student knowledge of the phonological system and of the letter names, their judgments of phonetic similarities and differences, and their ability to abstract phonetic information from letter names;		
3.4 illustrate the importance of creating programs to address the strengths and needs of individual learners; and		
3.5 show knowledge of federal, state, and local programs designed to help students with reading and writing problems.		
4.0 Reading Difficulties **The reading professional will:**		
4.1 demonstrate an understanding of the nature and multiple causes of reading and writing difficulties;		
4.2 demonstrate knowledge of principles for diagnosing reading difficulties;		
4.3 illustrate an understanding of individualized and group instructional interventions targeted toward those students in greatest need or at low proficiency levels; and		
4.4 show an understanding of the instructional implications of research in special education, psychology, and other fields that deal with the treatment of students with reading and learning difficulties.		
INSTRUCTION AND ASSESSMENT		
5.0 Creating a Literate Environment **The reading professional will be able to:**		
5.1 create a literate environment that fosters interest and growth in all aspects of literacy;		
5.2 use texts and trade books to stimulate interest, promote reading growth, foster appreciation for the written word, and increase the motivation of learners to read widely and independently for information, pleasure, and personal growth;		
5.3 model and discuss reading and writing as valuable, lifelong activities;		

5.4 provide opportunities for learners to select from a variety of written materials, to read extended texts, and to read for many authentic purposes;		
5.5 provide opportunities for creative and personal responses to literature, including storytelling;		
5.6 promote the integration of language arts in all content areas;		
5.7 use instructional and information technologies to support literacy learning; and		
5.8 implement effective strategies to include parents as partners in the literacy development of their children.		
6.0 Word Identification, Vocabulary, and Spelling **The reading professional will be able to:**		
6.1 teach students to monitor their own word identification through the use of syntax, semantic, and graphophonemic relations;		
6.2 use phonics to teach students to use their knowledge of letter/sound correspondence to identify sounds in the construction of meaning;		
6.3 teach students to use context to identify and define unfamiliar words;		
6.4 guide students to refine their spelling knowledge through reading and writing;		
6.5 teach students to recognize and use various spelling patterns in the English language as an aid to word identification; and		
6.6 employ effective techniques and strategies for the ongoing development of independent vocabulary acquisition.		
7.0 Comprehension **The reading professional will be able to:**		
7.1 provide direct instruction and model when and how to use multiple comprehension strategies, including retelling;		
7.2 model questioning strategies;		
7.3 teach students to connect prior knowledge with new information;		
7.4 teach students strategies for monitoring their own comprehension;		
7.5 ensure that students can use various aspects of text to gain comprehension, including conventions of written English, text structure and genres, figurative language, and intertextual links; and		
7.6 ensure that students gain understanding of the meaning and importance of the conventions of standard written English (e.g., punctuation or usage).		
8.0 Study Strategies **The reading professional will be able to:**		
8.1 provide opportunities to locate and use a variety of print, nonprint, and electronic reference sources;		
8.2 teach students to vary reading rate according to the purpose(s) and difficulty of the material;		
8.3 teach students effective time management strategies;		
8.4 teach students strategies to organize and remember information; and		
8.5 teach test-taking strategies.		

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9.0 Writing **The reading professional will be able to:**		
9.1 teach students planning strategies most appropriate for particular kinds of writing;		
9.2 teach students to draft, revise, and edit their writing; and		
9.3 teach students the conventions of standard written English needed to edit their compositions.		
10.0 Assessment **The reading professional will be able to:**		
10.1 develop and conduct assessments that involve multiple indicators of learner progress; and		
10.2 administer and use information from norm-referenced tests, criterion-referenced tests, formal and informal inventories, constructed response measures, portfolio-based assessments, student self-evaluations, work/performance samples, observations, anecdotal records, journals, and other indicators of student progress to inform instruction and learning.		
ORGANIZING AND ENHANCING A READING PROGRAM		
11.0 Communicating Information about Reading **The reading professional will be able to:**		
11.1 communicate with students about their strengths, areas for improvement, and ways to achieve improvement;		
11.2 communicate with allied professionals and paraprofessionals in assessing student achievement and planning instruction;		
11.3 involve parents in cooperative efforts and programs to support students' reading and writing development;		
11.4 communicate information about literacy and data to administrators, staff members, school board members, policymakers, the media, parents, and the community; and		
11.5 interpret research findings related to the improvement of instruction and communicate these to colleagues and the wider community.		
12.0 Curriculum Development **The reading professional will be able to:**		
12.1 initiate and participate in ongoing curriculum development and evaluation;		
12.2 adapt instruction to meet the needs of different learners to accomplish different purposes;		
12.3 supervise, coordinate, and support all services associated with literacy programs (e.g., needs assessment, program development, budgeting and evaluation, and grant and proposal writing);		
12.4 select and evaluate instructional materials for literacy, including those that are technology-based;		
12.5 use multiple indicators to determine effectiveness of the literacy curriculum;		
12.6 plan and implement programs designed to help students improve their reading and writing including those supported by federal, state, and local funding; and		
12.7 help develop individual educational plans for students with severe learning problems related to literacy.		

13.0 Professional Development **The reading professional will be able to:**		
13.1 participate in professional development programs;		
13.2 initiate, implement, and evaluate professional development programs;		
13.3 provide professional development experiences that help emphasize the dynamic interaction among prior knowledge, experience, and the school context as well as among other aspects of reading development;		
13.4 provide professional development experiences that are sensitive to school constraints (e.g., class size or limited resources);		
13.5 use multiple indicators to judge professional growth; and		
13.6 model ethical professional behavior.		
14.0 Research **The reading professional will be able to:**		
14.1 apply research for improved literacy;		
14.2 conduct research with a range of methodologies (e.g., ethnographic, descriptive, experimental, or historical); and		
14.3 promote and facilitate teacher- and classroom-based research.		
15.0 Supervision of Paraprofessionals **The reading professional will be able to:**		
15.1 plan lessons for paraprofessionals;		
15.2 observe and evaluate paraprofessionals interacting with children and provide feedback to them on their performance;		
15.3 provide professional development and training for paraprofessionals; and		
15.4 provide emotional and academic support for paraprofessionals.		
16.0 Professionalism **The reading professional will be able to:**		
16.1 pursue knowledge of literacy by reading professional journals and publications; and participating in conferences and other professional activities;		
16.2 reflect on one's practice to improve instruction and other services to students;		
16.3 interact with and participate in decision-making with teachers, teacher educators, theoreticians, and researchers;		
16.4 support and participate in efforts to improve the reading profession by being an advocate for licensing and certification;		
16.5 participate in local, state, national, and international professional organizations whose mission is the improvement of literacy;		
16.6 promote collegiality with other literacy professionals through regular conversations, discussions, and consultations about learners, literacy theory, and assessment and instruction;		
16.7 write for publication; and		
16.8 make presentations at local, state, regional, and national meetings and conferences.		

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Appendix C

Effective Undergraduate Literacy Programs: Descriptive Examples

Preparing Future Elementary Classroom Teachers to Teach Literacy at Gustavus Adolphus College (St. Peter, MN)

The Gustavus program model is driven by a conceptual framework of teaching as an intentional, reflective, and informed process. Students are prepared to become teachers who make decisions based on research and experience and based on a determination of doing what is right for children. Instructional models, assessment procedures, and supervisory practices guide student reflection and require rationales for action and response. Believing that knowledge is constructed, faculty provide a series of classroom and school-based experiences requiring increasing sophistication and skill. Students progress through the program in cohorts, and most courses are team-taught in order to model collaboration and shared decision making and to improve the depth and breadth of experience and instruction.

Undergraduate elementary education majors at Gustavus Adolphus College are enrolled in a program accredited by the National Council for Accreditation of Teacher Education and the National Association of State Directors of Education, approved by the Minnesota Board of Teaching, and leading to a Minnesota K-8 teaching license. Admission to the program is highly selective. An admissions committee of three faculty members and one current elementary education major admit up to 17 students each semester based on 13 criteria including a writing sample, letters of recommendation, an interview, and a minimum grade point average of 2.75. Additionally, most of the students who are admitted have prior and continuing volunteer teaching experience in summer camps and local programs including Headstart, ESL, Great Books, and a variety of other tutoring, mentoring, and after-school positions.

Following admission, students begin a rigorous 6-semester sequence of courses including field placements in kindergarten, an elementary classroom (Grades 1-6), a middle school classroom, a classroom serving children with disabilities, and a classroom or community organization serving individuals from varied cultural backgrounds, culminating in two half-semester student teaching placements in different grade levels. Gustavus graduates complete an average of 866 hours in classroom field experiences.

Three courses focus specifically on literacy. Students learn about models of reading acquisition and development and how to teach and assess phonological awareness and phonics, reading fluency, vocabulary, reading comprehension, spelling and word recognition, written composition, and how to promote reading and writing interest and independence. Strategies and techniques are modeled in class by instructors, practiced by students in classroom peer-teaching, and implemented in an accompanying 5-week practicum placement. Students practice assessment in class with videotapes of a wide variety of typically-developing readers, culturally diverse children, and children with disabilities. Students engage in a service-learning project with racially diverse, inner-city students that includes correspondence, reading and writing assessment, and creation of instructional materials to promote literacy skill development and interest. Students receive feedback on lesson plans and implementation from the course instructor, peers, service-learning partners, and their cooperating practicum teacher.

In addition to these three courses, literacy is integrated throughout the program in broader methods courses on kindergarten, social studies, science, mathematics, interdisciplinary instruction, inclusive classrooms, and classroom technology as well as

children's literature and social foundations of education. In the social studies methods course, for example, students learn how to integrate social studies and the language arts in a variety of ways, culminating in a family history project. In the kindergarten methods course, students learn how to integrate literacy across the curriculum. In the inclusive classrooms course, students learn how to develop lesson plans to address individual differences and needs and how to use assistive technologies to support communication and learning in children with disabilities. In the classroom technology course, students learn how to develop webquests to support student inquiry and how to use multimedia to support learning differences.

In all courses, students are taught about the complexities of life for learners. Although children'sdevelopment is inevitable and occasionally predictable, teaching and learning require critical and principled thought rather than simplistic recipes and responses. Student passing rates on the PPST and the Praxis I as well as job placements, all near 100%, and feedback from cooperating teachers and administrators provide validation of the approach.

Preparing Future Special Education Teachers to Teach Literacy at the University of Maryland-College Park

Undergraduate students majoring in special education at the University of Maryland-College Park participate in a rigorous 5-year, 150-credit-hour program. The program prepares each of these future teachers to work with a wide range of children with disabilities, including those with learning disabilities, emotional/behavioral difficulties, attention deficit and hyperactivity disorders, and physical and severe cognitive impairments. Admission to the program is selective and occurs during the sophomore year. The department admits students with minimum grade point average of 2.5 and satisfactory scores on the Praxis I examination. Many of the students who are admitted to the program also have prior volunteer experience in working with children with special needs.

Starting in their junior year, students begin a 3-year sequence of courses that are directly linked to field placements each semester, culminating in student teaching during their last semester. During their final or 5th year, their field placement (fall semester) and student teaching (spring semester) typically occur in the same school. The field placements take place in a variety of settings, including the regular classroom, providing students the opportunity to observe and work with normally developing readers and writers as well as those who experience considerable difficulties mastering these skills.

Teaching literacy to children with cognitive and behavioral difficulties is extremely challenging. To ensure that students in the program have the necessary skills to do this effectively, they take six courses in which literacy is emphasized. Three of the courses focus solely on literacy. These include an initial course in which students examine language and literacy development (e.g., components, milestones, and biological basis), models of reading acquisition and reading development, and the relationship between individual differences in language abilities and literacy development. The second course focuses on how to teach and assess basic literacy skills such as phonological awareness, phonics, reading fluency, vocabulary, reading comprehension, handwriting, spelling, and strategies for planning and revising text. Specific teaching techniques are modeled by the instructor and practiced in class and in the accompanying field placement. During this course, students prepare their first literacy lesson plans and receive feedback on them from the course instructor and their supervising field placement teacher before implementing them with children. The third course primarily concentrates on how to set up an effective literacy program for students with special needs, including the development of a positive and supportive literacy classroom; motivating reluctant readers and writers; implementing readers' and writers' workshops; selecting, organiz-

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ing, and evaluating children's reading material; developing a literacy unit; employing cooperative and peer-assisted learning procedures; teaching reading and writing to children from different economic and cultural backgrounds; and working effectively with parents and other school personnel. The field placement accompanying this course provides students with the opportunity to use what they are learning with children with physical and more severe cognitive difficulties.

In addition to these three courses, students also take two assessment courses in which assessing literacy and using such assessments to plan, evaluate, and modify instruction are also emphasized. In the first assessment course, students learn basic concepts related to test validity and reliability; how to administer and score standardized and nonstandardized tests; and how to administer, score, and interpret classroom-based assessments in reading and writing. From classroom-based assessment data collected in their field placement, students develop lesson plans responsive to students' individual needs. In the second assessment course, additional procedures for assessing reading and writing are examined, and students administer a range of assessment instruments in their field placement, including literacy measures, to a student with a special need, preparing a report in which the collected data are summarized and interpreted in a form that is suitable for both parents and other teachers. Furthermore, students take a curriculum and instruction course where they examine the scope and sequence of the general education curriculum in the language arts and learn how to plan and work collaboratively with the regular classroom teacher, make appropriate modifications and accommodations in their instruction, and plan literacy instruction that focuses on important skills or concepts (e.g., *big ideas*).

The use of technology to promote literacy development is supported in two ways. Students take a course on using technology in the classroom, and throughout the program, they examine a variety of technological tools designed to support literacy learning. In one course, for instance, students learn how to use assistive technology to support communication for students with physical and severe cognitive difficulties. In another course, they examine a variety of software programs designed to promote reading and writing development.

Self-evaluation and self-reflection are emphasized throughout the program. For example, when students administer a literacy lesson plan in their field placement, they are always required to reflect on what worked, what didn't work, and how they could improve the lesson if they were to teach it again. Likewise, there are a number of performance assessments that students complete (e.g., design, implement, and evaluate a unit) during their course work and field experiences, and the faculty use the information generated from these assessments to individually and collectively evaluate and modify (when necessary) specific courses or aspects of the program.

Preparing Future Elementary Classroom Teachers to Teach Literacy at Western Kentucky University (Bowling Green, KY)

The School of Teacher Education at Western Kentucky University prepares educators to demonstrate best teaching practices in real-world environments including respect and recognition for diversity in the integration of the arts, humanities, and sciences in the spirit of inquiry for life-long learning. The College of Education and Behavioral Sciences at Western Kentucky University is fully accredited at the undergraduate and graduate levels by the National Council for Accreditation of Teacher Education.

Undergraduate elementary education majors engage in a challenging and comprehensive study of aspects of language development, children's literature, and methodologies related to effective instruction in reading and writing. Course work

includes LTCY 320 (3 hours), an introduction to reading instruction for elementary grade children focusing on the examination of reading needs, teaching methods, materials, and resources related to reading skills development. The course requires that students examine their own literacy development as they prepare to teach elementary literacy in the classroom. Field experiences in public schools and/or other appropriate settings away from campus are required in conjunction with this course and provide students with experience in shared readings; designing and implementing literacy instruction in the form of Directed Reading Activities, Directed Reading-Thinking Activities, Directed Listening-Thinking Activities, or the Language Experience Approach (instructional format; and examining contextual factors in literacy development through observations and interactions in the classroom. This course also provides an introduction to core reading and writing concepts appropriate for primary students that include spelling, handwriting, and scenarios and syntheses of best practices in literacy instruction that include word recognition, comprehension, and major approaches and materials for reading instruction. The content includes exposure to teaching methods, materials, and resources necessary to effectively teach reading and writing to all students.

In conjunction with this introductory reading methods course, students take LME 288 (3 hours), an introduction to picture books, traditional literature, poetry, informational books, fiction, biography, and the development of a literature program in the schools. This course provides education students with a rudimentary study of the various forms of literature used in elementary schools in developing students' interests in reading. Preservice teachers are provided opportunities to become familiar with and collect personal anthologies of appropriate children's books that can be used in libraries, preschools, and elementary schools.

LTCY 420 (3 hours), Reading in the Primary Grades, is the second course in reading and is designed to offer a detailed view of the principles, materials, and methods of instruction for grades P-5. Field experiences in public schools and/or other appropriate settings away from campus are required. This course provides the skills necessary to teach reading and writing concepts in ways that are developmentally appropriate for elementary students. The content expands understanding of reading and writing concepts first introduced in LTCY 320 and includes a variety of teaching strategies to meet the needs of all children. Core content in LTCY 420 includes philosophies of the reading process; word identification processes that include phonemic awareness, phonics, and structural analysis; comprehension strategies for narrative and expository texts; fluency development; methods of addressing cultural and linguistic diversity in schools; vocabulary development; quality literature to be used with literacy instruction; content area reading methods; the writing process; the use of technology in literacy instruction; administering and interpreting holistic and informal assessments; the relationship between assessment and instruction; and intervention methods. Students in LTCY 420 use field experience opportunities to gain familiarity with the core concepts of the course and demonstrate understanding by planning literature-based units of literacy instruction; performing read-alouds; providing literacy instruction through such methods as the Language Experience Approach, direct instruction with a basal reading series, components of the Four-Blocks framework of literacy instruction, and Directed Reading-Thinking Activities; administering and interpreting Informal Reading Inventories and Analytic Spelling Inventories; and demonstrating the use of technology to teach reading and to share resources and information through a seven-page literacy Web site published on the Internet by each student.

In addition to these three courses, content area methods courses are "blocked" with the core literacy courses to provide for the integration of reading and writing instruction across the curriculum. Instructors work together to develop field-based projects that require students to integrate quality children's literature and content

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area reading methods into social studies, science, and mathematics instruction.

The Division of Literacy at WKU promotes lifelong learning through reading and writing for pleasure and function for every man, woman, and child. Preservice teachers are prepared to work in a changing, multicultural world as effective teachers of reading and writing. The literacy faculty believes learning is an active process in which students construct, test, and act upon their own understandings. The literacy faculty is committed to providing lifelong learning for both faculty and students by promoting courses of study that involve students and faculty in academic peer relationships stressing shared responsibility for learning and for the discovery of new knowledge. The literacy faculty is committed to research, scholarship, and creative work that results in superior teaching and service to the community and to the profession.

Preparing Classroom Teachers to Teach Literacy at North Carolina State University (Raleigh, NC)

The reading master's degree program in the Department of Curriculum and Instruction at North Carolina State University leads to licensure for teaching reading in K-12 settings. Candidates for the program must hold an initial teaching license in elementary or middle school education or in a high school content area. The advanced licensure program features a variety of opportunities to integrate effective classroom strategies with research and theory underlying the teaching of reading. Course work builds on a solid understanding of phonemic awareness, constructivist principles of reading and learning, and culturally responsive pedagogy and forwards the concept of teaching as a reflective and intentional process. Based on a commitment to experiential, inquiry-based learning, teachers enrolled in the reading master's degree program explore school-based applications and supervised clinical teaching experiences as they determine best practices for increasing students' reading abilities and ensuring meaningful engagement with text. Teachers demonstrate their knowledge of these best practices through a culminating professional experience that includes a portfolio or inquiry project shared in an annual forum with other reading professionals.

Signature courses in the reading master's degree program encompass a range of current literacy issues and concerns as students investigate practical applications of theory and research. A yearlong sequence introduces students to diagnosis and assessment of reading disabilities followed by supervised clinical experience in remediation. Advanced seminars in literacy theory and research explore both historic and contemporary theoretical perspectives and follow with the opportunity to conduct authentic research that is grounded in literacy theory. Mindful of the impact of new technologies on literacy instruction, Literacy Instruction, Technology and Media examines the changing literacy environment and the role technology and media play in current reading instruction. The course features hands-on Web activities and technology applications that are geared to grade-specific curricula. A core course in content area reading strategies has proven so effective that it is now offered in both face-to-face and distance-learning formats in order to extend this unique experience to teachers who may not be enrolled in the master's degree program.

Graduate students enrolled in the reading master's program may opt to complete either a 36-hour Master of Education (M.Ed.) or a 39-hour Master of Science (M.S.) degree. For the M.Ed. students, course work includes twenty-one credit hours in reading, nine credit hours from a core of curriculum and instruction courses, and six hours of electives. The M.S. degree requires an additional 3 hours of course work and a thesis.

The NCSU Reading program is fully accredited by the state's Department of Public Instruction and abides by the standards for effective programs set by IRA/NCATE. NCSU College of Education is NCATE approved.

Appendix D

Political Climate Check

The charge issued last year through First Lady Laura Bush's education initiative, Ready to Read—Ready to Learn, includes "A Guide for Parents: How Do I Know a Good Early Reading Program When I See One?" Endorsed by the U.S. Department of Education, the guide actually aligns rather closely with the most basic elements of this white paper. The guide describes what should be present for literacy learning in classrooms that have primarily homogeneous students and a costly support base of literature-rich materials, including fully stocked individual classroom libraries, which are not generally found in preschool and early elementary classrooms. In the publication, no guidance is offered for ensuring instruction that is responsive and appropriate for students from different cultures and economic situations or for students with disabilities or other individual differences. The use of technology as a tool and medium for literacy development also is not included. These problems of omission are significant. The guide does suggest that a "good early reading program" will include a teacher who is "excited about reading and promotes the value and fun of reading to students." The guide also stresses that all students be "carefully evaluated, beginning in kindergarten, to see what they know and what they need to become good readers." But nowhere does the guide address how teachers will be assisted in meeting individual needs identified through this assessment. What happens to the many children entering school who present a range of learning and teaching challenges, including minimal fluency in the mainstream language and physical and/or cognitive differences is not considered. The guide calls for extra instructional time during the school day and during the summer for these students, but little is said about what this instruction will be or how school districts will provide it. Many studies underscore the need for extra reading time and instruction for students who are reading below grade level. Special consideration should be taken to ensure this extra instruction time in reading *not* be limited to drills on word recognition. Burns et al. (2002) indicate that many times poor readers are placed in groups and limited to low-level word recognition strategies with the exclusion of reading real texts, having experiences with higher order thinking tasks, and focusing on comprehension strategies.

Again, the Bush guide speaks to schools in middle-class and more affluent neighborhoods with excellent resources, while failing to mention the needs of schools without the excellent libraries described or with children from different cultures and economic situations who come to school with special learning needs or students whose disabilities require a significant adaptation of instruction. Thus, although the basic aspects of Mrs. Bush's guide to a "good early reading program" are appropriate and match parts of the research-based finding in Parts I and II of this white paper, the guide omits mention of the increasingly diverse population of students found in contemporary schools.

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